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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/972,781	11/18/1997	DOUGLAS CARAWAY	WEAT/0409	6016

7590 01/20/2004

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EXAMINER

DANG, HOANG C

ART UNIT PAPER NUMBER

3672

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/972,781

Applicant(s)

CARAWAY, DOUGLAS

Examiner

Hoang Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15, 16 and 18-30 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

2. Claims 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al (US 5,979,571) in view of Beaton (US 6,009,962).

Scott et al disclose the invention as claimed (see the embodiment of Figures 1-2) except that the bit body is not disclosed as being made of a matrix material. Beaton discloses a drag type rotary drill bit as that of Scott et al. However, Beaton shows that it is well known in the art to make the bit body of a solid infiltrated matrix material to improve its wear resistance (see column 2, lines 13-26 and Figures 4-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the bit body of Scott et al of a matrix material as claimed in view of the teaching of Beaton for the advantage pointed out above.

As for claim 16, see column 4, lines 14-20 in Beaton.

As for claim 18, the "pilot section" does not distinguish from the lowermost portion of the bit body in Figure 1.

As for claims 21-22, in view of the disclosure in column 2, line 58 through column 3, line 9, it would have been obvious to have the first set of cutting elements precedes or trails the second set of cutting elements in the direction of rotation as long as the first set of cutting elements extend farther outwardly than the second set of cutting elements to allow the first set of

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cutting elements to wear away completely at the approximate time that the casing has been penetrated.

As for claims 22-24, 29 and 30, see Figures 1 and 2 and column 2, line 58 through column 3, line 9 in Scott et al.

As for claims 25-26, blades 18a and 18b in the embodiment of Figure 2 are considered as "cutting elements" of the first and second sets respectively and have different cross-sectional area and face configuration as recited.

As for claims 27-28, see Figure 2 and column 3, lines 1-2 in Scott et al.

Allowable Subject Matter

3. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments with respect to claims 15, 16 and 18-30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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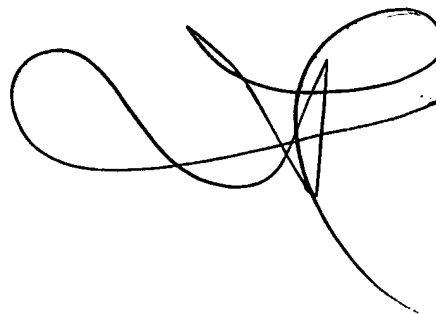
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Dang whose telephone number is 703-308-2149. The examiner can normally be reached on 9:15-5:45 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

Hoang Dang
Primary Examiner
Art Unit 3672

08972781.2non
January 8, 2004

A handwritten signature in black ink, consisting of a large, stylized 'H' followed by a series of loops and a long, sweeping tail that extends downwards and to the right.